

236 (T. H. Shen, p. 326.) The following is in 1,000 metric tons:

Province	Sheep Wool	Camel Hair	Cashmere
Kansu	3,611	180	30
Ninghsia	1,846	299	92
Chinghai	4,840	60	-
Sinkiang	12,853	22	10
Total	23,150	561	132

241 In Chinghai and elsewhere in the region fertilizer is scarce and the thick sod on the uncultivated hilltops is burnt in piles to help meet the fertilizer requirements of the fields below. The following is a description of the principle livestock raising area in Kansu and Chinghai. "The pasture land in Kansu and in the agricultural part of Chinghai is mostly the hill land far away from the cultivated fields and villages. It is not owned by farmers individually or collectively. It is public land. The right to graze these pastures is determined by the natural location of the villages in relation to these hills rather than by law. The nearest villages have more chance to use it. Sometimes one finds several villages grazing their sheep on the same hills without trouble. But if too many villages use the same pasture a definite agreement is made between the villages to limit certain villages to particular pastures. Such occasions rarely occur because the increase in sheep is naturally in accordance with the amount of pasture available. It is only in time of severe drought that the pastures are overstocked.

311 "The pasture of nomadic Chinghai (formerly a part of Tibet) is also public land but different tribes and clans have the exclusive right to use only such land as has been allotted to them by the government or by tradition. Within the boundaries of a certain tribe the pasture is open to all its member families, but no family owns any particular lot. There is no fencing or walls.

311 "The condition of these pastures is determined by annual rainfall. More rain and snow assure better grass. No human effort, such as seeding, manuring, irrigation or drainage is ever applied." (Buck, Land Utilization p. 176.)

4. Forestry

313 The following chart indicates the percentage of forest land for the region.

Province	Percentage of land in Forest
Kansu	6.0
Ninghsia	4.0
Shensi	16.0
Chinghai	2.0

If we leave out Shensi as a section of the Northwest, as George B. Cressy does, the Northwest is reported to have only one twentieth as much standing timber as the Northeast region (Heilungkiang, Kirin, Liaoning), or 197,429,814 cubic meters, which is located

- 313 mostly in Kansu. In 1945, large-scale afforestation projects were undertaken by the provincial government, especially in Ninghsia. [185] The exceptional fact about these projects was that the young seedlings were properly cared for and did not die as so frequently occurred in other afforestation schemes. The Ninghsia projects were, of course, taken over by the Chinese Communists.

311 In the loess plateau region, between the great wall and the
137 mountains, and between the Tibetan Highlands on the West and
313 the Yellow plain to the East, there is almost no forest cover.
Forests are found only in the more inaccessible areas or in temple groves. Their disappearance is related partly to needs for lumber but also to the introduction of new crops, such as corn and Irish potatoes, which will grow on the upper slopes. Many hills [241] were burned over in order to clear the land for a cultivation [134] which could last for only a few years until erosion swept away the last trace of soil.

5. The border region

* 175 In 1937, the Chinese Communists occupied the northern portion
* 668 of Shensi as well as the fringe areas of Chinghai, Kansu, and
433 Ninghsia. This region was regarded as the Shensi, Kansu, Ninghsia, Chinghai border region and was developed by the Communists [437] into a relatively self-sufficient area. When they were able, they exchanged surpluses such as oil, salt, herbs, skin and wool for articles which they could not as yet produce in sufficient quantity.

* 175 The Communists carried out land reform as soon as they were
* 668 fully entrenched in power. Large land holdings were cut up and
[423] parcelled out to peasants with little or no land. Rents and interest rates were reduced, efforts were made to extend cultivation, increase the number of draft animals, and develop labor cooperation beyond family circles.

* 175 In a study by Yung-ying Hsu, issued by the Institute of Pacific
* 668 Relations, there is a summary of the economy and military status
433 of this region. There are numerous statistics to indicate increases in production of certain crops. These are the only available statistics we have for the region during this period, and the figures seem to indicate that despite the excessive expenditures for the maintenance of an army and guerilla forces as well as a governing body and administration, progress was made in raising the level of agriculture. However, by 1943, trade figures for the region indicate an imbalance of payments and a drain of currency from the region indicating that increasing military commitments were absorbing the created wealth of the region.

D. Conclusion

13 We may sum up the obstacles to agricultural development as
241 follows: geographic and climatic problems are the most serious.
311 The amount of cultivable land that can be reclaimed and used for

000 and it is already reported that some cotton cloth is being shipped to the U.S.S.R.

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In the field of credit financing, purchasing and marketing, extensive efforts have been underway to place these activities under the control of cooperatives specifically erected and designed to extend State control over the rural areas. These co-ops are designed to assist in agricultural planning and to assure the realization of annual output quotas. Credit cooperatives are closely coordinated with the development of agricultural producer cooperatives in order to provide them with funds to develop and simultaneously to absorb any liquid savings that have accrued among these co-ops. For the purpose of State purchasing and marketing, cooperatives have been set up which survey individual households to determine household consumption and output. Frequently, advance purchases of expected agricultural surpluses are made by these co-ops. All surpluses which can be purchased by State marketing and supply co-ops are channeled through State apparatus to where they can be used most efficiently.

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The State has taken measures to increase livestock production by first attempting to set up mutual aid teams among the pastoral people and sending specially trained teams into the pastoral areas to immunize animals, teach the herders better care of their stock to prevent loss of animals, and conduct breeding experiments to improve the quality of livestock. Superior types of animals from the Soviet Union have been imported on some occasions to be bred with native stock.

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Pests, locusts, and animal diseases have always been a scourge in this region. The State has undertaken to acquire technicians and airplanes from the U.S.S.R. to spray regions where the threat of locusts has become serious. Insecticide has been distributed throughout the lower level agricultural co-ops and campaigns have been conducted among the peasants to eliminate plant and animal diseases.

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Teams have been sent out to survey forested portions of the region and to determine what measures might be taken to expand existent forest reserves, plant saplings, establish nurseries and carry out large-scale afforestation to prevent erosion.

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These have been the general measures taken by the Chinese Communists so far to develop agriculture in this portion of the country. Some successes have been scored; e.g., in increasing the number of livestock and higher crop yields per acre by the introduction of better procedures of livestock care and farming. However, the program of organizing the peasantry into co-ops to achieve similar results, has not been successful in every instance.

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Bandits and dissatisfied portions of the minorities who did not welcome the Communists have been quite active in disrupting their programs. As the years in the first five year plan pass, the plan-

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231 The number of large domestic animals increased to over 2,586,000, that of sheep (including goats) to over 3,003,500 and that of pigs to over 1,825,000. There are four state livestock farms. Compared to pre-war figures, domestic animals and pigs increased twofold while sheep increased nearly twelvefold.

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*175 In addition, a campaign for afforestation and forest protection was launched so that in northern Shensi by the end of 1954, some 280,000 mou (42,560 acres) had been afforested by the State. During 1954, 206,900 mou (31,449 acres) were afforested, nurseries occupied 4,900 mou (754 acres), 856,100 mou (130,127 acres) of wooded wilderness were surveyed, and new forest developments were carried out on 61,500 mou (9,348 acres).

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(241) By 1955 it is planned to increase the grain acreage so that it will be 70,150,000 mou (10,662,800 acres) and the total output 1,970,000 piculs (13,002 tons). Oil bearing crops will be increased and plans to develop animal husbandry are underway so that there will be 2,790,000 large domestic animals, 2,008,000 pigs, and 3,515,000 goats and sheep to relieve the shortage of meat and dairy products in the markets. In 1955, the area to be

(313) afforested will be 280,000 mou (42,424 acres) and 7,000 mou (1,064 acres) will be used for nurseries. Tea plantations will be strengthened and growing of vegetables in the suburbs of cities will be promoted. All this will be accomplished by increasing the pace of cooperativization for 1955; seventy-five per cent of all households will be cooperativized and agricultural producer co-ops will total 21,000. A spring campaign will be launched also to enlarge the sowing area and improve stock breeding, and efforts will be made to strengthen leadership over production in hilly regions; technical reforms will be continued and stepped up. Finally, satisfactory supplies of consumer and producer goods will be given to the peasant. The latter (producer goods) include farm implements, fertilizers, draft animals, insecticides, spraying equipment and good seeds.

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(241) Some of the defects that crop up in Shensi are particularly serious since it is one of the most advanced provinces in the Northwest, from the standpoint of the large number of co-ops. The following obstacles have arisen to obstruct the campaign to step up cooperativization. So-called rural "capitalist forces" and rumors fabricated by counter-revolutionary elements have brought uneasiness to the middle peasants. Consequently, peasants have sold or slaughtered their farm animals, felled trees, rushed to buy consumer goods, squandered their money. This state of affairs is supposed to have resulted because the correct policy of solidifying poor and middle peasants has not been carried out. Commandism among the cadres is reported to prevail and this has had the over-all result of slowing down cooperativization.

000 So-called counter-revolutionary elements were reported to

*668 policies. Such resistance is revealed in instances where wheat
659 fields have been enlarged at the expense of cotton cultivation.
433 Any failure to carry out the State's purchasing plans correctly
248 then, will "undermine the prestige of the party and of state poli-
cies, encourage spontaneous capitalist tendencies among the peas-
ants, and throw State plans into confusion." (Survey of China
Mainland Press. No. 971. Supplement, January 19, 1955.
"Make Accurate Estimates of Cotton Output and Fix Purchase
Quotas.") Since the publication of this article on estimating
cotton output and fixing purchase quotas, Peking has encouraged
the "three fix policy" which is a measure designed to overcome
food and agricultural raw material shortages in order to meet
the planned targets set by the State. This policy provides for
every administrative body throughout China to fix the production,
fix the purchase of output, and fix the marketing of this output
for the agricultural sectors of the Chinese economy. Undoubt-
edly this policy has been rigorously applied to the Northwest.
Information is not available, however, as to whether the "three
fix policy" has solved the above problems.

4. Kansu

*668 The Communists have made strenuous efforts to restore Kansu
185 to its former prosperity (in the days of the old Silk Road to Europe
Kansu was a fertile and prosperous region). The plan to build
Lanchow, the capital, into an industrial base safely removed from
the seacoast, the opening of the Lanchow-Sinkiang Railway, and
the extensive geological surveys for minerals and oil, indicate
recent attempts to do this. On March 14, 1956, Deputy K'o Shih-
king reported on the province's five year plan. Only information
pertaining to agricultural progress and policy will be considered.
*668 The total output of grain and cotton in 1956 will be 10,350 million
185 catties (207 million bushels) and 250,000 piculs (16,662 tons)
433 respectively, representing 124.42 per cent (or 6,882,750 tons of
[241] grain) and 281.87 per cent of the quotas set for 1957 in the first
five year plan. Afforestation will be carried out over an area of
• [313] 5,300,000 mou (806,061 acres). (Union Research Service. Vol.
3, No. 3, April 10, 1956. p. 40.)

185 A comparison of Communist output figures with those of the
433 pre-Communist period is difficult. Since we cannot consider
[114] wheat only as grain (grain in this case would include corn, barley,
millet, etc.) We possess no figures for oil seed bearing crops
[248] for 1956. However, for cotton, where Communist resources have
been invested to expand cotton production and output, the 1956
figure of 16,662 tons as compared with the 1941 high of 3,712
tons represents around a fourfold increase.

*668 The Chinese Communists predict that the vast areas of waste-
185 land in Kansu will be transformed into cotton fields soon. Ex-
248 perts have been experimenting, it is reported, to select the most
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361 124 FROM LANCHOU FU TO T'AOCHOU [CH.

312 Hsien, surrounded by rich irrigated lands, is a city of some importance, occupying a strategic position between Lanchou Fu and the Mahomedan strongholds round Ho Chou. It [277] is also a centre of the water pipe tobacco industry and of the trade in lumber, the latter rafted down the T'ao River [313] from the forests of the Kokonor.

From Titao to Weiyuan Hsien is a distance of 110 li 487 across the watershed between the T'ao and Wei rivers, which can be divided into two marches by halting at the hamlets of Yaotien or Ch'ingp'ing, where there are inns, 133 50 and 80 li out respectively. Leaving Titao the road runs up a shallow cultivated valley bounded by hills of red clay in an easterly and then a southerly direction for 80 li to the hamlet of Ch'ingp'ing, where the valley is a mere ravine. From here it ascends a grassy ridge which is followed for two hours' march to gain the watershed pass, and then drops steeply to Weiyuan Hsien. The railway from Hsian to Lanchou which, it is proposed, shall follow up the Wei valley, will here presumably require a tunnel through this watershed to reach the valley of the T'ao. Weiyuan is of some interest to the Chinese as lying on the headwaters of their historical river the Wei. We found it a small but well-kept city, rejoicing in a particularly progressive young [491] magistrate. The river is here quite small and easily fordable, and its valley though narrow is cultivated and has a prosperous appearance.

From Weiyuan to Kungch'ang is a march of 90 li by a good road down the valley, generally a mile or two wide, well cultivated, and bounded by bare hills. Numerous villages are passed, the largest being Shouyang Ch'eng, half way. Kungch'ang Fu, now known as Lungshi Hsien, is a large city in extent, but having been destroyed during the Mahomedan rebellion is still half in ruins. Another march of 90 li, still down the valley, brings one to Ningyuan. Forty li out the hills close in on the valley which becomes barren [491] and stony. The Wei River is forded twice on this stage and also the Nan Ho, a large tributary from the south. The latter was in flood and gave us some trouble. Immediately after crossing the Nan Ho there is a steep ascent and descent over a ridge which blocks the valley at this point, followed by an hour's march down the open valley to Ningyuan.

x] FROM T'AOCHOU TO LANCHOU FU 143

valley, at first through cultivated fields and then through a densely wooded gorge. This is a difficult march in the summer, as the trail constantly crosses and recrosses the stream, which is rapid, obstructed by boulders, and only just fordable. Several of us got a wetting, but we were lucky in keeping the pack-mules on their feet and our bedding dry. The mountains in the neighbourhood are covered with fine forest, but mostly on the slopes facing north only, a peculiarity which may be noticed all along the Kokonor border; I have observed the same thing in the forests of Northern Shansi; whether it is that the sun is too hot on the southern slopes, or that the northern slopes alone receive sufficient moisture, I am unable to say. Four to five hours' march down this gorge, past several small lamaseries, brings one to the junction of this stream with the Tahsia River, a torrent flowing from Labrang to Ho Chou. The Labrang road turns up this valley and runs for a few li through cultivated fields to the small monastery of Shakou Ssu, which lies on the north side of the stream, with a Mahomedan hamlet, Sasuma, opposite, where we passed the night in an inn. There are pine forests all around, and the Tahsia River, though only a mountain torrent, is used for rafting the cut timber down to the Yellow River and Lanchou. The timber is made up into narrow sections, fastened one behind the other, and the jointed raft which results is navigated down the rapids and through the rocks with extraordinary skill by Mahomedan raftmen.

From Heitso to Labrang is a distance of some 120 li, and Sasuma lies about half way, the track running for the rest of the way up the valley of the Tahsia River. For the first 30 li the path is very bad and rocky, the valley being a gorge hemmed in by wooded mountains; there is no more fording to be done, however, as the river is spanned by good cantilever bridges, this being a portion of the Labrang-Ho Chou road, which is much used by the mule trains of Mahomedan merchants. In this neighbourhood we saw some *ma chi*, the large and handsome silver pheasant with red legs (*Crossoptilon auritum*, probably). For the second 30 li the valley opens out and the road becomes a good highway. The first intimation we received of the approach to Labrang were the white and blue tents dotted

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JADE GATE TO ANSIH

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house had proved to bring a blessing, so we were welcomed accordingly. On one occasion, to our joy the innkeeper's wife assured us that she had never once touched the opium-pipe since our last visit, for we had told her distinctly that this *must* go if she would serve God. Then, too, the stages seemed easier, from the fact of their familiarity, as we now knew when to look out for a deserted city, or a clump of trees, or a rushing stream, or a sandy waste. We passed with even more wonder than formerly the site of the buried city of Pulungki, and marvelled once again that so extensive a town could have been recaptured by the Gobi till from being a busy habitation of men it had become the haunt of wolves.

There is a certain ancient river-bed a few miles out from Santaokow, which must hold some considerable underground water supply, since groves of fine trees border it, among which was a large-leaved willow growing to the size and shape of an English oak. The villagers had also effected an arboreal experiment there which was new to us, for we saw large plantations of young willows grafted with poplar, and they told us that by this means they produced a very useful tree, having the quick-growing properties of the willow together with the superior wood of the poplar.

As on former occasions our journeys were taken by night, but being midsummer the hours of darkness were brief, and we had the benefit of a long evening as well as of an early dawn, which enabled us to take more note of our surroundings. Ansi seemed more deeply submerged in the encroaching sands than even before. One more winter of sandstorms had passed over it, and its population bore the impress of yet another winter of opium indulgence. Our inn rooms seemed more than usually gloomy and filthy, while over the